

TABLE OF CONTENTS

Table of Contents	i
List of Figures	xii
List of Tables	xiii
List of Acronyms and Abbreviations	xxix
Chemicals and Units of Measure	xxxvi
Metric Conversion Chart and Metric Prefixes	xxxix

Volume II - Part A

Chapter 4	
Environmental Consequences	4-1
4.1 Methods for Assessing Environmental Impacts	4-3
4.1.1 Land Resources	4-3
4.1.2 Site Infrastructure	4-5
4.1.3 Air Quality and Noise	4-6
4.1.4 Water Resources	4-9
4.1.5 Geology and Soils	4-11
4.1.6 Biological Resources	4-12
4.1.7 Cultural and Paleontological Resources	4-14
4.1.8 Socioeconomics	4-15
4.1.9 Public and Occupational Health and Safety	4-17
4.1.10 Waste Management	4-21
4.2 No Action Alternative and Long-Term Storage Alternatives	4-23
4.2.1 Hanford Site	4-23
4.2.1.1 Land Resources	4-25
4.2.1.2 Site Infrastructure	4-29
4.2.1.3 Air Quality and Noise	4-33
4.2.1.4 Water Resources	4-39
4.2.1.5 Geology and Soils	4-45
4.2.1.6 Biological Resources	4-48
4.2.1.7 Cultural and Paleontological Resources	4-51
4.2.1.8 Socioeconomics	4-54
4.2.1.9 Public and Occupational Health and Safety	4-59
4.2.1.10 Waste Management	4-75
4.2.2 Nevada Test Site	4-83
4.2.2.1 Land Resources	4-84
4.2.2.2 Site Infrastructure	4-87
4.2.2.3 Air Quality and Noise	4-90
4.2.2.4 Water Resources	4-95
4.2.2.5 Geology and Soils	4-99
4.2.2.6 Biological Resources	4-102
4.2.2.7 Cultural and Paleontological Resources	4-105
4.2.2.8 Socioeconomics	4-107
4.2.2.9 Public and Occupational Health and Safety	4-111
4.2.2.10 Waste Management	4-126

4.2.3	Idaho National Engineering Laboratory	4-131
4.2.3.1	Land Resources	4-132
4.2.3.2	Site Infrastructure	4-134
4.2.3.3	Air Quality and Noise	4-137
4.2.3.4	Water Resources	4-143
4.2.3.5	Geology and Soils	4-148
4.2.3.6	Biological Resources	4-151
4.2.3.7	Cultural and Paleontological Resources	4-154
4.2.3.8	Socioeconomics	4-156
4.2.3.9	Public and Occupational Health and Safety	4-160
4.2.3.10	Waste Management	4-173
4.2.4	Pantex Plant	4-181
4.2.4.1	Land Resources	4-183
4.2.4.2	Site Infrastructure	4-186
4.2.4.3	Air Quality and Noise	4-189
4.2.4.4	Water Resources	4-198
4.2.4.5	Geology and Soils	4-204
4.2.4.6	Biological Resources	4-207
4.2.4.7	Cultural and Paleontological Resources	4-209
4.2.4.8	Socioeconomics	4-211
4.2.4.9	Public and Occupational Health and Safety	4-216
4.2.4.10	Waste Management	4-233
4.2.5	Oak Ridge Reservation	4-240
4.2.5.1	Land Resources	4-242
4.2.5.2	Site Infrastructure	4-245
4.2.5.3	Air Quality and Noise	4-248
4.2.5.4	Water Resources	4-254
4.2.5.5	Geology and Soils	4-260
4.2.5.6	Biological Resources	4-262
4.2.5.7	Cultural and Paleontological Resources	4-265
4.2.5.8	Socioeconomics	4-267
4.2.5.9	Public and Occupational Health and Safety	4-272
4.2.5.10	Waste Management	4-283
4.2.6	Savannah River Site	4-291
4.2.6.1	Land Resources	4-292
4.2.6.2	Site Infrastructure	4-295
4.2.6.3	Air Quality and Noise	4-298
4.2.6.4	Water Resources	4-303
4.2.6.5	Geology and Soils	4-309
4.2.6.6	Biological Resources	4-312
4.2.6.7	Cultural and Paleontological Resources	4-315
4.2.6.8	Socioeconomics	4-317
4.2.6.9	Public and Occupational Health and Safety	4-321
4.2.6.10	Waste Management	4-335
4.2.7	Rocky Flats Environmental Technology Site	4-343
4.2.7.1	Land Resources	4-344
4.2.7.2	Site Infrastructure	4-345
4.2.7.3	Air Quality and Noise	4-346
4.2.7.4	Water Resources	4-348
4.2.7.5	Geology and Soils	4-350
4.2.7.6	Biological Resources	4-351
4.2.7.7	Cultural and Paleontological Resources	4-352

4.2.7.8	Socioeconomics	4-353
4.2.7.9	Public and Occupational Health and Safety	4-355
4.2.7.10	Waste Management	4-359
4.2.8	Los Alamos National Laboratory	4-363
4.2.8.1	Land Resources	4-364
4.2.8.2	Site Infrastructure	4-365
4.2.8.3	Air Quality and Noise	4-366
4.2.8.4	Water Resources	4-369
4.2.8.5	Geology and Soils	4-371
4.2.8.6	Biological Resources	4-372
4.2.8.7	Cultural and Paleontological Resources	4-373
4.2.8.8	Socioeconomics	4-374
4.2.8.9	Public and Occupational Health and Safety	4-375
4.2.8.10	Waste Management	4-379

Volume II - Part B

4.3	Plutonium Disposition Alternatives and Related Activities	4-383
4.3.1	Pit Disassembly/Conversion Facility	4-383
4.3.1.1	Land Resources	4-384
4.3.1.2	Site Infrastructure	4-387
4.3.1.3	Air Quality and Noise	4-391
4.3.1.4	Water Resources	4-393
4.3.1.5	Geology and Soils	4-401
4.3.1.6	Biological Resources	4-402
4.3.1.7	Cultural and Paleontological Resources	4-406
4.3.1.8	Socioeconomics	4-409
4.3.1.9	Public and Occupational Health and Safety	4-411
4.3.1.10	Waste Management	4-424
4.3.2	Plutonium Conversion Facility	4-427
4.3.2.1	Land Resources	4-427
4.3.2.2	Site Infrastructure	4-430
4.3.2.3	Air Quality and Noise	4-435
4.3.2.4	Water Resources	4-441
4.3.2.5	Geology and Soils	4-448
4.3.2.6	Biological Resources	4-449
4.3.2.7	Cultural and Paleontological Resources	4-453
4.3.2.8	Socioeconomics	4-456
4.3.2.9	Public and Occupational Health and Safety	4-458
4.3.2.10	Waste Management	4-471
4.3.3	Deep Borehole Alternative Category	4-474
4.3.3.1	Direct Disposition Alternative	4-474
4.3.3.1.1	Land Resources	4-475
4.3.3.1.2	Site Infrastructure	4-476
4.3.3.1.3	Air Quality and Noise	4-478
4.3.3.1.4	Water Resources	4-480
4.3.3.1.5	Geology and Soils	4-483
4.3.3.1.6	Biological Resources	4-484
4.3.3.1.7	Cultural and Paleontological Resources	4-486
4.3.3.1.8	Socioeconomics	4-487
4.3.3.1.9	Public and Occupational Health and Safety	4-489
4.3.3.1.10	Waste Management	4-494

LIST OF FIGURES

Volume II - Part B

Figure 4.5.1–1	Minority Population Distribution for Hanford Site and Surrounding Area.	4–842
Figure 4.5.1–2	Low-Income Distribution by Poverty Status for Hanford Site and Surrounding Area.	4–843
Figure 4.5.1–3	Minority Population Distribution for Nevada Test Site and Surrounding Area.	4–844
Figure 4.5.1–4	Low-Income Distribution by Poverty Status for Nevada Test Site and Surrounding Area.	4–845
Figure 4.5.1–5	Minority Population Distribution for Idaho National Engineering Laboratory and Surrounding Area.	4–846
Figure 4.5.1–6	Low-Income Distribution by Poverty Status for Idaho National Engineering Laboratory and Surrounding Area.	4–847
Figure 4.5.1–7	Minority Population Distribution for Pantex Plant and Surrounding Area.	4–848
Figure 4.5.1–8	Low-Income Distribution by Poverty Status for Pantex Plant and Surrounding Area.	4–849
Figure 4.5.1–9	Minority Population Distribution for Oak Ridge Reservation and Surrounding Area.	4–850
Figure 4.5.1–10	Low-Income Distribution by Poverty Status for Oak Ridge Reservation and Surrounding Area.	4–851
Figure 4.5.1–11	Minority Population Distribution for Savannah River Site and Surrounding Area.	4–852
Figure 4.5.1–12	Low-Income Distribution by Poverty Status for Savannah River Site and Surrounding Area.	4–853
Figure 4.5.1–13	Minority Population Distribution for Rocky Flats Environmental Technology Site and Surrounding Area.	4–854
Figure 4.5.1–14	Low-Income Distribution by Poverty Status for Rocky Flats Environmental Technology Site and Surrounding Area.	4–855
Figure 4.5.1–15	Minority Population Distribution for Los Alamos National Laboratory and Surrounding Area.	4–856
Figure 4.5.1–16	Low-Income Distribution by Poverty Status for Los Alamos National Laboratory and Surrounding Area.	4–857

LIST OF TABLES

Volume II - Part A

Table 4-1	Key to Locating Information on Environmental Consequences and Mitigation Measures for Storage Alternatives by Page Number	4-1
Table 4-2	Key to Locating Information on Environmental Consequences and Mitigation Measures for Disposition Alternatives by Page Number.....	4-2
Table 4.1.8-1	Level of Service Letter Designations and Definitions	4-16
Table 4.2.1.2-1	Site Infrastructure Changes Required for Operation at Hanford Site (Annual)—No Action (2005) and Storage Alternatives	4-30
Table 4.2.1.3-1	Estimated Operational Concentrations of Pollutants at Hanford Site and Comparison With Most Stringent Regulations or Guidelines—No Action (2005) and Storage Alternatives.....	4-34
Table 4.2.1.4-1	No Action and Potential Changes to Water Resources at Hanford Site—No Action (2005) and Storage Alternatives	4-40
Table 4.2.1.9-1	Potential Radiological Impacts to the Public During Normal Operation at Hanford Site—No Action and Storage Alternatives.....	4-60
Table 4.2.1.9-2	Potential Radiological Impacts to Workers During Normal Operation at Hanford Site—Storage Alternatives	4-61
Table 4.2.1.9-3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation at Hanford Site—No Action and Storage Alternatives	4-62
Table 4.2.1.9-4	Upgrade Without Rocky Flats Environmental Technology Site or Los Alamos National Laboratory Material Alternative—Accident Impacts at Hanford Site	4-66
Table 4.2.1.9-5	Upgrade With Rocky Flats Environmental Technology Site and Los Alamos National Laboratory Material Alternative—Accident Impacts at Hanford Site	4-68
Table 4.2.1.9-6	Consolidation Alternative Accident Impacts at Hanford Site.....	4-71
Table 4.2.1.9-7	Collocation Alternative Accident Impacts at Hanford Site	4-73
Table 4.2.1.10-1	Projected Spent Nuclear Fuel and Waste Management Under No Action (2005) at Hanford Site.....	4-76
Table 4.2.1.10-2	Estimated Annual Generated Waste Volumes at Hanford Site—No Action (2005) and Net Incremental for Storage Alternatives	4-78
Table 4.2.2.2-1	Site Infrastructure Changes Required for Operation at Nevada Test Site (Annual)—No Action (2005) and Storage Alternatives	4-88
Table 4.2.2.3-1	Estimated Operational Concentrations of Pollutants at Nevada Test Site and Comparison With Most Stringent Regulations or Guidelines—No Action (2005) and Storage Alternatives	4-91
Table 4.2.2.4-1	No Action and Potential Changes to Water Resources at Nevada Test Site—No Action (2005) and Storage Alternatives	4-96

Table 4.2.2.9–1	Potential Radiological Impacts to the Public During Normal Operation at Nevada Test Site—No Action and Storage Alternatives	4–112
Table 4.2.2.9–2	Potential Radiological Impacts to Workers During Normal Operation at Nevada Test Site—Storage Alternatives.....	4–114
Table 4.2.2.9–3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation at Nevada Test Site—No Action and Storage Alternatives	4–115
Table 4.2.2.9–4	Consolidation Alternative (P-Tunnel) Accident Impacts at Nevada Test Site	4–117
Table 4.2.2.9–5	Consolidation Alternative (New Storage Facility) Accident Impacts at Nevada Test Site	4–120
Table 4.2.2.9–6	Collocation Alternative (P-Tunnel) Accident Impacts at Nevada Test Site	4–122
Table 4.2.2.9–7	Collocation Alternative (New Pu and HEU Facilities) Accident Impacts at Nevada Test Site	4–125
Table 4.2.2.10–1	Projected Waste Management Under No Action (2005) at Nevada Test Site	4–127
Table 4.2.2.10–2	Estimated Annual Generated Waste Volumes at Nevada Test Site—No Action (2005) and Net Incremental for Storage Alternatives	4–128
Table 4.2.3.2–1	Site Infrastructure Changes Required for Operation at Idaho National Engineering Laboratory (Annual)—No Action (2005) and Storage Alternatives	4–135
Table 4.2.3.3–1	Estimated Operational Concentrations of Pollutants at Idaho National Engineering Laboratory and Comparison With Most Stringent Regulations or Guidelines—No Action (2005) and Storage Alternatives	4–138
Table 4.2.3.4–1	No Action and Potential Changes to Water Resources at Idaho National Engineering Laboratory—No Action (2005) and Storage Alternatives	4–144
Table 4.2.3.9–1	Potential Radiological Impacts to the Public During Normal Operation at Idaho National Engineering Laboratory—No Action and Storage Alternatives	4–161
Table 4.2.3.9–2	Potential Radiological Impacts to Workers During Normal Operation at Idaho National Engineering Laboratory—Storage Alternatives.....	4–162
Table 4.2.3.9–3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation at Idaho National Engineering Laboratory—No Action (2005) and Storage Alternatives	4–162
Table 4.2.3.9–4	Upgrade Without Rocky Flats Environmental Technology Site or Los Alamos National Laboratory Material Alternative—Accident Impacts at Idaho National Engineering Laboratory	4–166
Table 4.2.3.9–5	Upgrade With Rocky Flats Environmental Technology Site and Los Alamos National Laboratory Material Alternative—Accident Impacts at Idaho National Engineering Laboratory	4–167
Table 4.2.3.9–6	Consolidation Alternative Accident Impacts at Idaho National Engineering Laboratory	4–169

Table 4.2.3.9–7	Collocation Alternative Accident Impacts at Idaho National Engineering Laboratory	4–172
Table 4.2.3.10–1	Projected Spent Nuclear Fuel and Waste Management Under No Action (2005) at Idaho National Engineering Laboratory	4–174
Table 4.2.3.10–2	Estimated Annual Generated Waste Volumes at Idaho National Engineering Laboratory—No Action (2005) and Net Incremental for Storage Alternatives	4–176
Table 4.2.4.2–1	Site Infrastructure Changes Required for Operation at Pantex Plant (Annual)—No Action (2005) and Storage Alternatives	4–187
Table 4.2.4.3–1	Estimated Operational Concentrations of Pollutants at Pantex Plant and Comparison With Most Stringent Regulations or Guidelines—No Action (2005) and Storage Alternatives	4–190
Table 4.2.4.4–1	No Action and Potential Changes to Water Resources at Pantex Plant—No Action (2005) and Storage Alternatives	4–199
Table 4.2.4.9–1	Potential Radiological Impacts to the Public During Normal Operation at Pantex Plant—No Action and Storage Alternatives	4–217
Table 4.2.4.9–2	Potential Radiological Impacts to Workers During Normal Operation at Pantex Plant—Storage Alternatives.....	4–219
Table 4.2.4.9–3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation at Pantex Plant—No Action and Storage Alternatives	4–220
Table 4.2.4.9–4	Upgrade With Rocky Flats Environmental Technology Site Plutonium Pits Subalternative—Accident Impacts at Pantex Plant	4–222
Table 4.2.4.9–5	Consolidated Storage for Pantex Plant Surplus Materials Storage Building—Accident Impacts	4–226
Table 4.2.4.9–6	Consolidated Storage for Pantex Plant Strategic Reserves Storage Building—Accident Impacts	4–227
Table 4.2.4.9–7	Consolidation Alternative Accident Impacts at Pantex Plant	4–229
Table 4.2.4.9–8	Collocation Alternative Accident Impacts at Pantex Plant.....	4–232
Table 4.2.4.10–1	Projected Waste Management Under No Action (2005) at Pantex Plant	4–234
Table 4.2.4.10–2	Estimated Annual Generated Waste Volumes at Pantex Plant—No Action (2005) and Net Incremental for Storage Alternatives	4–236
Table 4.2.5.2–1	Site Infrastructure Changes Required for Operation at Oak Ridge Reservation (Annual)—No Action (2005) and Storage Alternatives	4–246
Table 4.2.5.3–1	Estimated Operational Concentrations of Pollutants at Oak Ridge Reservation and Comparison With Most Stringent Regulations or Guidelines—No Action (2005) and Storage Alternatives	4–249
Table 4.2.5.4–1	No Action and Potential Changes to Water Resources at Oak Ridge Reservation—No Action (2005) and Storage Alternatives	4–255
Table 4.2.5.9–1	Potential Radiological Impacts to the Public During Normal Operation at Oak Ridge Reservation—No Action and Storage Alternatives	4–273

Table 4.2.5.9–3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation at Oak Ridge Reservation—No Action and Storage Alternatives	4–275
Table 4.2.5.9–4	Collocation Alternative Accident Impacts at Oak Ridge Reservation.....	4–279
Table 4.2.5.10–1	Projected Spent Nuclear Fuel and Waste Management Under No Action (2005) at Oak Ridge Reservation	4–284
Table 4.2.5.10–2	Estimated Annual Generated Waste Volumes at Oak Ridge Reservation—No Action (2005) and Net Incremental for Storage Alternatives	4–286
Table 4.2.6.2–1	Site Infrastructure Changes Required for Operation at Savannah River Site (Annual)—No Action (2005) and Storage Alternatives	4–296
Table 4.2.6.3–1	Estimated Operational Concentrations of Pollutants at Savannah River Site and Comparison With Most Stringent Regulations or Guidelines—No Action (2005) and Storage Alternatives	4–299
Table 4.2.6.4–1	No Action and Potential Changes to Water Resources at Savannah River Site—No Action (2005) and Storage Alternatives	4–304
Table 4.2.6.9–1	Potential Radiological Impacts to the Public During Normal Operation at Savannah River Site—No Action and Storage Alternatives.....	4–322
Table 4.2.6.9–2	Potential Radiological Impacts to Workers During Normal Operation at Savannah River Site—Storage Alternatives	4–323
Table 4.2.6.9–3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation at Savannah River Site—No Action and Storage Alternatives	4–324
Table 4.2.6.9–4	Upgrade With Rocky Flats Environmental Technology Site Non-Pit Plutonium Subalternative—Accident Impacts at Savannah River Site	4–328
Table 4.2.6.9–5	Upgrade With All or Some Rocky Flats Environmental Technology Site Plutonium and Los Alamos National Laboratory Plutonium Subalternative—Accident Impacts at Savannah River Site	4–329
Table 4.2.6.9–6	Consolidation Alternative Accident Impacts at Savannah River Site	4–331
Table 4.2.6.9–7	Collocation Alternative Accident Impacts at Savannah River Site	4–334
Table 4.2.6.10–1	Projected Spent Nuclear Fuel and Waste Management Under No Action (2005) at Savannah River Site	4–336
Table 4.2.6.10–2	Estimated Annual Generated Waste Volumes at Savannah River Site—No Action (2005) and Net Incremental for Storage Alternatives	4–338
Table 4.2.7.2–1	Site Infrastructure Changes Required for Operation at Rocky Flats Environmental Technology Site (Annual)—No Action (2005) and Storage Phaseout	4–345
Table 4.2.7.4–1	No Action and Potential Changes to Water Resources at Rocky Flats Environmental Technology Site—No Action (2005) and Storage Phaseout	4–348
Table 4.2.7.9–1	Potential Radiological Impacts to the Public During Normal Operation at Rocky Flats Environmental Technology Site—No Action.....	4–356
Table 4.2.7.9–2	Potential Radiological Impacts to Workers During Normal Operation at Rocky Flats Environmental Technology Site—No Action.....	4–357

Table 4.2.7.9–2	Potential Radiological Impacts to Workers During Normal Operation at Rocky Flats Environmental Technology Site—No Action.....	4–357
Table 4.2.7.9–3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation at Rocky Flats Environmental Technology Site—No Action	4–357
Table 4.2.7.10–1	Projected Waste Management Under No Action (2005) at Rocky Flats Environmental Technology Site	4–360
Table 4.2.8.2–1	Site Infrastructure Changes Required for Operation at Los Alamos National Laboratory (Annual)—No Action (2005) and Storage Phaseout.....	4–365
Table 4.2.8.3–1	Estimated Operational Concentrations of Pollutants at Los Alamos National Laboratory and Comparison With Most Stringent Regulations or Guidelines—No Action (2005)	4–367
Table 4.2.8.4–1	No Action and Potential Changes to Water Resources at Los Alamos National Laboratory—No Action (2005) and Storage Phaseout	4–369
Table 4.2.8.9–1	Potential Radiological Impacts to the Public During Normal Operation at Los Alamos National Laboratory—No Action	4–376
Table 4.2.8.9–2	Potential Radiological Impacts to Workers During Normal Operation at Los Alamos National Laboratory—No Action	4–377
Table 4.2.8.9–3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation at Los Alamos National Laboratory—No Action.....	4–377
Table 4.2.8.10–1	Projected Waste Management Under No Action (2005) at Los Alamos National Laboratory	4–380

Volume II - Part B

Table 4.3.1.2–1	Additional Site Infrastructure Needed for the Construction of the Pit Disassembly/Conversion Facility (Annual)	4–388
Table 4.3.1.2–2	Additional Site Infrastructure Needed for the Operation of the Pit Disassembly/Conversion Facility (Annual)	4–389
Table 4.3.1.4–1	Potential Changes to Water Resources Resulting From Pit Disassembly/Conversion Facility	4–394
Table 4.3.1.9–1	Potential Radiological Impacts to the Public During Normal Operation of the Pit Disassembly/Conversion Facility	4–412
Table 4.3.1.9–2	Potential Radiological Impacts to Workers During Normal Operation of the Pit Disassembly/Conversion Facility	4–414
Table 4.3.1.9–3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation of the Pit Disassembly/Conversion Facility	4–416
Table 4.3.1.9–4	Pit Disassembly/Conversion Facility Accident Impacts at Hanford Site	4–417
Table 4.3.1.9–5	Pit Disassembly/Conversion Facility Accident Impacts at Nevada Test Site.....	4–418
Table 4.3.1.9–6	Pit Disassembly/Conversion Facility Accident Impacts at Idaho National Engineering Laboratory	4–419
Table 4.3.1.9–7	Pit Disassembly/Conversion Facility Accident Impacts at Pantex Plant.....	4–420

Table 4.3.1.9–8	Pit Disassembly/Conversion Facility Accident Impacts at Oak Ridge Reservation	4–421
Table 4.3.1.9–9	Pit Disassembly/Conversion Facility Accident Impacts at Savannah River Site	4–422
Table 4.3.1.10–1	Estimated Annual Generated Waste Volumes for the Pit Disassembly/Conversion Facility	4–425
Table 4.3.2.2–1	Additional Site Infrastructure Needed for the Construction of the Plutonium Conversion Facility (Annual).....	4–430
Table 4.3.2.2–2	Additional Site Infrastructure Needed for the Operation of the Plutonium Conversion Facility (Annual).....	4–432
Table 4.3.2.3.–1	Estimated Operational Concentrations of Pollutants and Comparison With Most Stringent Regulations or Guidelines—Plutonium Conversion Facility and No Action Alternative	4–436
Table 4.3.2.4–1	Potential Changes to Water Resources Resulting From the Plutonium Conversion Facility	4–442
Table 4.3.2.9–1	Potential Radiological Impacts to the Public During Normal Operation of the Plutonium Conversion Facility	4–459
Table 4.3.2.9–2	Potential Radiological Impacts to Workers During Normal Operation of the Plutonium Conversion Facility	4–461
Table 4.3.2.9–3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation of the Plutonium Conversion Facility	4–463
Table 4.3.2.9–4	Plutonium Conversion Facility Accident Impacts at Hanford Site.....	4–464
Table 4.3.2.9–5	Plutonium Conversion Facility Accident Impacts at Nevada Test Site	4–465
Table 4.3.2.9–6	Plutonium Conversion Facility Accident Impacts at Idaho National Engineering Laboratory	4–466
Table 4.3.2.9–7	Plutonium Conversion Facility Accident Impacts at Pantex Plant	4–467
Table 4.3.2.9–8	Plutonium Conversion Facility Accident Impacts at Oak Ridge Reservation	4–468
Table 4.3.2.9–9	Plutonium Conversion Facility Accident Impacts at Savannah River Site.....	4–469
Table 4.3.2.10–1	Estimated Annual Generated Waste Volumes for the Plutonium Conversion Facility	4–471
Table 4.3.3.1.2–1	Additional Site Infrastructure Needed for the Construction of the Deep Borehole Complex—Direct Disposition Alternative (Annual)	4–476
Table 4.3.3.1.2–2	Additional Site Infrastructure Needed for the Operation of the Deep Borehole Complex—Direct Disposition Alternative (Annual)	4–477
Table 4.3.3.1.3–1	Estimated Operational Concentrations of Pollutants and Comparison With Most Stringent Regulations or Guidelines—Deep Borehole Complex and No Action Alternative—Direct Disposition Alternative	4–479
Table 4.3.3.1.4–1	Potential Changes to Water Resources Resulting From the Deep Borehole Complex—Direct Disposition Alternative	4–480
Table 4.3.3.1.9–1	Potential Radiological Impacts to the Public During Normal Operation of the Deep Borehole Complex—Direct Disposition Alternative	4–490

Table 4.3.3.1.9–2	Potential Radiological Impacts to Workers During Normal Operation of the Deep Borehole Complex—Direct Disposition Alternative	4–491
Table 4.3.3.1.9–3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation of the Deep Borehole Complex—Direct Disposition Alternative	4–492
Table 4.3.3.1.9–4	Range of Accident Impacts for a Set of Accidents for the Deep Borehole Complex—Direct Disposition Alternative	4–493
Table 4.3.3.1.10–1	Estimated Annual Generated Waste Volumes for the Deep Borehole Complex—Direct Disposition Alternative	4–494
Table 4.3.3.2.1.2–1	Additional Site Infrastructure Needed for the Construction of the Ceramic Immobilization Facility (For Borehole)—Immobilized Disposition Alternative (Annual)	4–500
Table 4.3.3.2.1.2–2	Additional Site Infrastructure Needed for the Operation of the Ceramic Immobilization Facility (For Borehole)—Immobilized Disposition Alternative (Annual)	4–502
Table 4.3.3.2.1.3–1	Estimated Operational Concentrations of Pollutants and Comparison With Most Stringent Regulations or Guidelines—Ceramic Immobilization Facility and No Action Alternative (For Borehole)—Immobilized Disposition Alternative	4–505
Table 4.3.3.2.1.4–1	Potential Changes to Water Resources Resulting From Ceramic Immobilization Facility (For Borehole)—Immobilized Disposition Alternative	4–509
Table 4.3.3.2.1.9–1	Potential Radiological Impacts to the Public During Normal Operation of the Ceramic Immobilization Facility (For Borehole)—Immobilized Disposition Alternative	4–528
Table 4.3.3.2.1.9–2	Potential Radiological Impacts to Workers During Normal Operation of the Ceramic Immobilization Facility (For Borehole)—Immobilized Disposition Alternative	4–530
Table 4.3.3.2.1.9–3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation of the Ceramic Immobilization Facility (For Borehole)—Immobilized Disposition Alternative	4–532
Table 4.3.3.2.1.9–4	Ceramic Immobilization Facility (For Borehole) for Immobilized Disposition Alternative—Accident Impacts at Hanford Site	4–533
Table 4.3.3.2.1.9–5	Ceramic Immobilization Facility (For Borehole) for Immobilized Disposition Alternative—Accident Impacts at Nevada Test Site	4–534
Table 4.3.3.2.1.9–6	Ceramic Immobilization Facility (For Borehole) for Immobilized Disposition Alternative—Accident Impacts at Idaho National Engineering Laboratory	4–535
Table 4.3.3.2.1.9–7	Ceramic Immobilization Facility (For Borehole) for Immobilized Disposition Alternative—Accident Impacts at Pantex Plant	4–536
Table 4.3.3.2.1.9–8	Ceramic Immobilization Facility (For Borehole) for Immobilized Disposition Alternative—Accident Impacts at Oak Ridge Reservation	4–537
Table 4.3.3.2.1.9–9	Ceramic Immobilization Facility (For Borehole) for Immobilized Disposition Alternative—Accident Impacts at Savannah River Site	4–538

Table 4.3.3.2.1.10–1 Estimated Annual Generated Waste Volumes for Ceramic Immobilization Facility (For Borehole)—Immobilized Disposition Alternative.....	4–541
Table 4.3.3.2.2.2–1 Additional Site Infrastructure Needed for the Construction of the Deep Borehole Complex—Immobilized Disposition Alternative (Annual)	4–544
Table 4.3.3.2.2.2–2 Additional Site Infrastructure Needed for the Operation of the Deep Borehole Complex—Immobilized Disposition Alternative (Annual)	4–545
Table 4.3.3.2.2.3–1 Estimated Operational Concentrations of Pollutants and Comparison With Most Stringent Regulations or Guidelines—Deep Borehole Complex and No Action Alternative—Immobilized Disposition Alternative	4–547
Table 4.3.3.2.2.9–1 Potential Radiological Impacts to the Public During Normal Operation of the Deep Borehole Complex—Immobilized Disposition Alternative.....	4–554
Table 4.3.3.2.2.9–2 Potential Radiological Impacts to Workers During Normal Operation of the Deep Borehole Complex—Immobilized Disposition Alternative.....	4–555
Table 4.3.3.2.2.9–3 Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation of the Deep Borehole Complex—Immobilized Disposition Alternative	4–556
Table 4.3.3.2.2.9–4 Range of Accident Impacts of the Deep Borehole Complex—Immobilized Disposition Alternative	4–557
Table 4.3.3.2.2.10–1 Estimated Annual Generated Waste Volumes for the Deep Borehole Complex—Immobilized Disposition Alternative	4–560
Table 4.3.4.1.2–1 Additional Site Infrastructure Needed for the Construction of the Vitrification Facility Alternative (Annual)	4–565
Table 4.3.4.1.2–2 Additional Site Infrastructure Needed for the Operation of the Vitrification Facility Alternative (Annual)	4–566
Table 4.3.4.1.3–1 Estimated Operational Concentrations of Pollutants and Comparison With Most Stringent Regulations or Guidelines—Vitrification Alternative and No Action Alternative.....	4–568
Table 4.3.4.1.4–1 Potential Changes to Water Resources Resulting From the Vitrification Alternative.....	4–572
Table 4.3.4.1.9–1 Potential Radiological Impacts to the Public During Normal Operation of the Vitrification Alternative.....	4–590
Table 4.3.4.1.9–2 Potential Radiological Impacts to Workers During Normal Operation of the Vitrification Alternative.....	4–593
Table 4.3.4.1.9–3 Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation of the Vitrification Alternative	4–594
Table 4.3.4.1.9–4 Vitrification Alternative Accident Impacts at Hanford Site	4–595
Table 4.3.4.1.9–5 Vitrification Alternative Accident Impacts at Nevada Test Site	4–596
Table 4.3.4.1.9–6 Vitrification Alternative Accident Impacts at Idaho National Engineering Laboratory	4–597
Table 4.3.4.1.9–7 Vitrification Alternative Accident Impacts at Pantex Plant.....	4–598
Table 4.3.4.1.9–8 Vitrification Alternative Accident Impacts at Oak Ridge Reservation	4–599
Table 4.3.4.1.9–9 Vitrification Alternative Accident Impacts at Savannah River Site	4–600

Table 4.3.4.1.10–1	Estimated Annual Generated Waste Volumes for the Vitrification Alternative.....	4–603
Table 4.3.4.2.2–1	Additional Site Infrastructure Needed for the Construction of the Ceramic Immobilization Alternative (Annual)	4–609
Table 4.3.4.2.2–2	Additional Site Infrastructure Needed for the Operation of the Ceramic Immobilization Alternative (Annual)	4–610
Table 4.3.4.2.3–1	Estimated Operational Concentrations of Pollutants and Comparison With Most Stringent Regulations or Guidelines—Ceramic Immobilization Alternative and No Action Alternative	4–614
Table 4.3.4.2.4–1	Potential Changes to Water Resources Resulting From the Ceramic Immobilization Alternative.....	4–617
Table 4.3.4.2.9–1	Potential Radiological Impacts to the Public During Normal Operation of the Ceramic Immobilization Alternative	4–636
Table 4.3.4.2.9–2	Potential Radiological Impacts to Workers During Normal Operation of the Ceramic Immobilization Alternative	4–638
Table 4.3.4.2.9–3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation of the Ceramic Immobilization Alternative.....	4–640
Table 4.3.4.2.9–4	Ceramic Immobilization Alternative Accident Impacts at Hanford Site	4–642
Table 4.3.4.2.9–5	Ceramic Immobilization Alternative Accident Impacts at Nevada Test Site	4–644
Table 4.3.4.2.9–6	Ceramic Immobilization Alternative Accident Impacts at Idaho National Engineering Laboratory	4–646
Table 4.3.4.2.9–7	Ceramic Immobilization Alternative Accident Impacts at Pantex Plant	4–648
Table 4.3.4.2.9–8	Ceramic Immobilization Alternative Accident Impacts at Oak Ridge Reservation	4–650
Table 4.3.4.2.9–9	Ceramic Immobilization Alternative Accident Impacts at Savannah River Site....	4–652
Table 4.3.4.2.10–1	Estimated Annual Generated Waste Volumes for the Ceramic Immobilization Alternative.....	4–654
Table 4.3.4.3.2–1	Additional Site Infrastructure Needed for the Operation of the Electrometallurgical Treatment Alternative at Idaho National Engineering Laboratory (Annual)	4–658
Table 4.3.4.3.3–1	Estimated Operational Concentrations of Pollutants and Comparison With Most Stringent Regulations or Guidelines—Electrometallurgical Treatment Alternative and No Action Alternative	4–660
Table 4.3.4.3.9–1	Potential Radiological Impacts to the Public During Normal Operation of the Electrometallurgical Treatment Alternative at Idaho National Engineering Laboratory	4–667
Table 4.3.4.3.9–2	Potential Radiological Impacts to Workers During Normal Operation of the Electrometallurgical Treatment at Idaho National Engineering Laboratory	4–668
Table 4.3.4.3.9–3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation of the Electrometallurgical Treatment Alternative at Idaho National Engineering Laboratory	4–668
Table 4.3.4.3.10–1	Estimated Annual Generated Waste Volumes for the Electrometallurgical Treatment Alternative	4–670

Table 4.3.5.1.2–1	Additional Site Infrastructure Needed for the Construction of the Mixed Oxide Fuel Fabrication Facility (Annual).....	4–676
Table 4.3.5.1.2–2	Additional Site Infrastructure Needed for the Operation of the Mixed Oxide Fuel Fabrication Facility (Annual).....	4–677
Table 4.3.5.1.4–1	Potential Changes to Water Resources Resulting From the Mixed Oxide Fuel Fabrication Facility	4–683
Table 4.3.5.1.9–1	Potential Radiological Impacts to the Public During Normal Operation of the Mixed Oxide Fuel Fabrication Facility.....	4–705
Table 4.3.5.1.9–2	Potential Radiological Impacts to Workers During Normal Operation of the Mixed Oxide Fuel Fabrication Facility.....	4–708
Table 4.3.5.1.9–3	Potential Hazardous Chemical Impacts to the Public and Workers During Normal Operation of the Mixed Oxide Fuel Fabrication Facility	4–709
Table 4.3.5.1.9–4	Mixed Oxide Fuel Fabrication Facility Accident Impacts at Hanford Site	4–711
Table 4.3.5.1.9–5	Mixed Oxide Fuel Fabrication Facility Accident Impacts at Nevada Test Site	4–712
Table 4.3.5.1.9–6	Mixed Oxide Fuel Fabrication Facility Accident Impacts at Idaho National Engineering Laboratory	4–713
Table 4.3.5.1.9–7	Mixed Oxide Fuel Fabrication Facility Accident Impacts at Pantex Plant.....	4–714
Table 4.3.5.1.9–8	Mixed Oxide Fuel Fabrication Facility Accident Impacts at Oak Ridge Reservation	4–715
Table 4.3.5.1.9–9	Mixed Oxide Fuel Fabrication Facility Accident Impacts at Savannah River Site	4–716
Table 4.3.5.1.10–1	Estimated Annual Generated Waste Volumes for the Mixed Oxide Fuel Fabrication Facility	4–718
Table 4.3.5.2.2–1	Additional Site Infrastructure Needed for the Operation of One Existing Light Water Reactor (Annual)	4–721
Table 4.3.5.2.9–1	Potential Radiological Impacts to the Public During Normal Operation of the Existing Light Water Reactor	4–729
Table 4.3.5.2.9–2	Potential Radiological Impacts to Workers During Normal Operation of the Existing Light Water Reactor	4–730
Table 4.3.5.2.9–3	Accident Impacts for Existing Light Water Reactor With Mixed Oxide Fuels.....	4–732
Table 4.3.5.2.9–4	Ratio of Accident Impacts for Mixed Oxide Fueled and Uranium Fueled Reactors for Typical Severe Accidents (Mixed Oxide Impacts/Uranium Impacts).	4–733
Table 4.3.5.3.2–1	Additional Site Infrastructure Needed for the Operation of the Partially Completed Light Water Reactor (Annual).....	4–736
Table 4.3.5.3.3–1	Estimated Incremental Operational Concentrations of Pollutants and Comparison With Most Stringent Regulations or Guidelines—Partially Completed Reactor.....	4–738
Table 4.3.5.3.9–1	Potential Radiological Impacts to the Public During Normal Operation of the Partially Completed Light Water Reactor	4–745
Table 4.3.5.3.9–2	Potential Radiological Impacts to Workers During Normal Operation of the Partially Completed Light Water Reactor	4–745

Table 4.3.5.3.10–1	Estimated Annual Waste Volumes Generated Per Reactor for Mixed Oxide Fuel in Partially Completed Light Water Reactors	4–748
Table 4.3.5.4.2–1	Additional Site Infrastructure Needed for the Construction of the Large or Small Evolutionary Light Water Reactor (Annual)	4–753
Table 4.3.5.4.2–2	Additional Site Infrastructure Needed for the Operation of the Large Evolutionary Light Water Reactor (Annual)	4–754
Table 4.3.5.4.2–3	Additional Site Infrastructure Needed for the Operation of the Small Evolutionary Light Water Reactor (Annual)	4–755
Table 4.3.5.4.3–1	Estimated Operational Concentrations of Pollutants and Comparison With Most Stringent Regulations or Guidelines—Evolutionary Light Water Reactor and No Action Alternative.....	4–758
Table 4.3.5.4.4–1	Potential Changes to Water Resources Resulting From the Large Evolutionary Light Water Reactor.....	4–763
Table 4.3.5.4.4–2	Potential Changes to Water Resources Resulting From the Small Evolutionary Light Water Reactor.....	4–764
Table 4.3.5.4.9–1	Potential Radiological Impacts to the Public During Normal Operation of the Large Evolutionary Light Water Reactor	4–790
Table 4.3.5.4.9–2	Potential Radiological Impacts to the Public During Normal Operation of the Small Evolutionary Light Water Reactor	4–792
Table 4.3.5.4.9–3	Potential Radiological Impacts to Workers During Normal Operation of the Large Evolutionary Light Water Reactor	4–795
Table 4.3.5.4.9–4	Potential Radiological Impacts to Workers During Normal Operation of the Small Evolutionary Light Water Reactor	4–796
Table 4.3.5.4.9–5	Potential Hazardous Chemical Impacts to the Public and Workers Resulting From Normal Operation of the Large or Small Evolutionary Light Water Reactor	4–797
Table 4.3.5.4.9–6	Evolutionary Light Water Reactor Accident Impacts at Hanford Site	4–799
Table 4.3.5.4.9–7	Evolutionary Light Water Reactor Accident Impacts at Nevada Test Site	4–800
Table 4.3.5.4.9–8	Evolutionary Light Water Reactor Accident Impacts at Idaho National Engineering Laboratory	4–801
Table 4.3.5.4.9–9	Evolutionary Light Water Reactor Accident Impacts at Pantex Plant.....	4–802
Table 4.3.5.4.9–10	Evolutionary Light Water Reactor Accident Impacts at Oak Ridge Reservation	4–803
Table 4.3.5.4.9–11	Evolutionary Light Water Reactor Accident Impacts at Savannah River Site	4–804
Table 4.3.5.4.10–1	Estimated Annual Generated Spent Nuclear Fuel and Waste Volumes for the Large Evolutionary Light Water Reactor	4–806
Table 4.3.5.4.10–2	Estimated Annual Generated Spent Nuclear Fuel and Waste Volumes for the Small Evolutionary Light Water Reactor	4–807
Table 4.4.2.2–1	Transportation Modes and Comparison Ratings by Site	4–814
Table 4.4.2.3–1	Transportation Summary of Radioactive Materials and Packagings for Alternatives	4–817

Table 4.4.3.2-1	Total Potential Fatalities From Intersite Transportation Activities for the Preferred Alternative for Storage	4-821
Table 4.4.3.2-2	Total Potential Fatalities From the Transportation of Rocky Flats Environmental Technology Site Plutonium and Los Alamos National Laboratory Plutonium for the Upgrade Alternative.....	4-822
Table 4.4.3.2-3	Total Potential Fatalities From the Transportation of Plutonium for the Consolidation Alternative.....	4-822
Table 4.4.3.2-4	Total Potential Fatalities From the Transportation of Plutonium and Highly Enriched Uranium for the Collocation Alternative.....	4-823
Table 4.4.3.3-1	Total Potential Fatalities From the Transportation of Plutonium From Existing Storage Sites to a Pit Disassembly/Conversion or Plutonium Conversion Site.....	4-824
Table 4.4.3.3-2	Total Potential Fatalities From the Transportation of Plutonium and Immobilized Materials for the Deep Borehole Category of Alternatives	4-825
Table 4.4.3.3-3	Total Potential Fatalities From the Transportation of Plutonium and Immobilized Materials for the Immobilization Category of Alternatives.....	4-826
Table 4.4.3.3-4	Total Potential Fatalities From the Transportation of Plutonium Oxide, Uranium Oxide, and Mixed Oxide Fuel for the Reactor Category of Alternatives.....	4-829
Table 4.4.3.3-5	Highest Number of Potential Fatalities From the Transportation of Materials for Each Disposition Alternative	4-829
Table 4.5.1-1	Selected Demographic Characteristics for the Hanford Site Region of Influence.....	4-834
Table 4.5.1-2	Selected Demographic Characteristics for the Nevada Test Site Region of Influence.....	4-835
Table 4.5.1-3	Selected Demographic Characteristics for the Idaho National Engineering Laboratory Region of Influence	4-836
Table 4.5.1-4	Selected Demographic Characteristics for the Pantex Plant Region of Influence.....	4-837
Table 4.5.1-5	Selected Demographic Characteristics for the Oak Ridge Reservation Region of Influence.....	4-838
Table 4.5.1-6	Selected Demographic Characteristics for the Savannah River Site Region of Influence.....	4-839
Table 4.5.1-7	Selected Demographic Characteristics for the Rocky Flats Environmental Technology Site Region of Influence	4-840
Table 4.5.1-8	Selected Demographic Characteristics for the Los Alamos National Laboratory Region of Influence	4-841
Table 4.6.1-1	Storage and Disposition Actions at Department of Energy Sites Proposed by the Preferred Alternative	4-859
Table 4.6.1-2	Incremental Impact Indicators Over No Action From the Annual Operation of the Storage Actions Under the Preferred Alternative	4-860
Table 4.6.1-3	Land-Use Requirements From the Preferred Alternative	4-863

Table 4.6.1–4	Site Infrastructure Requirements From the Preferred Alternative	4–865
Table 4.6.1–5	Estimated Operational Concentrations of Pollutants From the Preferred Alternative, Including No Action	4–866
Table 4.6.1–6	Potential Changes to Water Resources Resulting From the Preferred Alternative.....	4–870
Table 4.6.1–7	Changes to Economic and Demographic Indicators for the Preferred Alternative (Full Operation)	4–877
Table 4.6.1–8	Potential Human Health Impacts to the Public and Workers Under Normal Operation and Potential Accidents for the Preferred Alternative at Hanford Site	4–881
Table 4.6.1–9	Potential Human Health Impacts to the Public and Workers Under Normal Operation and Potential Accidents for the Preferred Alternative at Idaho National Engineering Laboratory	4–882
Table 4.6.1–10	Potential Human Health Impacts to the Public and Workers Under Normal Operation and Potential Accidents for the Preferred Alternative at Pantex Plant.....	4–883
Table 4.6.1–11	Potential Human Health Impacts to the Public and Workers Under Normal Operation and Potential Accidents for the Preferred Alternative at Savannah River Site.....	4–884
Table 4.6.1–12	Estimated Annual Generated Waste Volumes for the Preferred Alternative	4–887
Table 4.6.1–13	Total Potential Fatalities From the Transportation of Materials for the Preferred Alternative.....	4–893
Table 4.6.2–1	Maximum Incremental Direct Employment Over No Action Generated During Operation at Each Candidate Site	4–894
Table 4.6.2–2	Maximum Annual Net Incremental Water Usage Over No Action During Operation at Each Candidate Site	4–894
Table 4.6.2–3	Maximum Annual Net Incremental Volume of Solid Low-Level Waste Generated Over No Action During Operation at Each Candidate Site.....	4–895
Table 4.6.2–4	Maximum Annual Net Incremental Volume of Solid Transuranic Waste Generated Over No Action During Operation at Each Candidate Site.....	4–895
Table 4.6.2–5	Maximum Annual Net Incremental Volume of Solid Hazardous Waste Generated Over No Action During Operation at Each Candidate Site.....	4–895
Table 4.6.2–6	Maximum Latent Cancer Fatalities Over No Action for Maximally Exposed Individual for 50 Years From Normal Operation	4–896
Table 4.6.3–1	Incremental Increase During Operation for Activities Common to Disposition Alternatives.....	4–900
Table 4.6.3–2	Incremental Net Increase During Operation by Disposition Alternative.....	4–901
Table 4.7.1–1	Reasonably Foreseeable Future Programs at Department of Energy Sites.....	4–910
Table 4.7.2.1.2–1	Site Infrastructure Cumulative Operation Impacts at Hanford Site.....	4–911
Table 4.7.2.1.3–1	Estimated Cumulative Operational Concentrations of Pollutants at Hanford Site and Comparison With Most Stringent Regulations or Guidelines—No Action or Storage Alternatives	4–912

Table 4.7.2.1.4–1	Cumulative Annual Water Usage at Hanford Site	4–914
Table 4.7.2.1.4–2	Cumulative Annual Wastewater Discharge at Hanford Site.....	4–914
Table 4.7.2.1.8–1	Socioeconomic Cumulative Impacts at Hanford Site	4–915
Table 4.7.2.1.9–1	Estimated Average Annual Cumulative Radiological Doses and Resulting Health Effects to the Public and Workers From Normal Operation at Hanford Site	4–916
Table 4.7.2.1.10–1	Waste Management Cumulative Impacts at Hanford Site (2005)—Annual Volumes.....	4–917
Table 4.7.2.2.2–1	Site Infrastructure Cumulative Operation Impacts at Nevada Test Site	4–920
Table 4.7.2.2.4–1	Cumulative Annual Water Usage at Nevada Test Site	4–921
Table 4.7.2.2.4–2	Cumulative Annual Wastewater Discharge at Nevada Test Site.....	4–921
Table 4.7.2.2.3–1	Estimated Cumulative Operational Concentrations of Pollutants at Nevada Test Site and Comparison With Most Stringent Regulations or Guidelines—No Action and Storage Alternatives	4–922
Table 4.7.2.2.8–1	Socioeconomic Cumulative Impacts at Nevada Test Site	4–923
Table 4.7.2.2.9–1	Estimated Average Annual Cumulative Radiological Doses and Resulting Health Effects to the Public and Workers From Normal Operation at Nevada Test Site	4–924
Table 4.7.2.2.10–1	Waste Management Cumulative Impacts at Nevada Test Site (2005)—Annual Volumes	4–925
Table 4.7.2.3.2–1	Site Infrastructure Cumulative Impacts at Idaho National Engineering Laboratory	4–927
Table 4.7.2.3.3–1	Estimated Cumulative Operational Concentrations of Pollutants at Idaho National Engineering Laboratory and Comparison With Most Stringent Regulations or Guidelines—No Action and Storage Alternatives	4–928
Table 4.7.2.3.4–1	Cumulative Annual Water Usage at Idaho National Engineering Laboratory ..	4–930
Table 4.7.2.3.4–2	Cumulative Annual Wastewater Discharge at Idaho National Engineering Laboratory	4–930
Table 4.7.2.3.8–1	Socioeconomic Cumulative Impacts at Idaho National Engineering Laboratory ..	4–931
Table 4.7.2.3.9–1	Estimated Average Annual Cumulative Radiological Doses and Resulting Health Effects to the Public and Workers From Normal Operation at Idaho National Engineering Laboratory	4–932
Table 4.7.2.3.10–1	Waste Management Cumulative Impacts at Idaho National Engineering Laboratory (2005)—Annual Volumes	4–933
Table 4.7.2.4.2–1	Site Infrastructure Cumulative Operation Impacts at Pantex Plant	4–935
Table 4.7.2.4.3–1	Estimated Cumulative Operational Concentrations of Pollutants at Pantex Plant and Comparison With Most Stringent Regulations or Guidelines—No Action and Storage Alternatives	4–936
Table 4.7.2.4.4–1	Cumulative Annual Water Usage at Pantex Plant	4–939
Table 4.7.2.4.4–2	Cumulative Annual Wastewater Discharge at Pantex Plant	4–939
Table 4.7.2.4.8–1	Socioeconomic Cumulative Impacts at Pantex Plant.....	4–939

Table 4.7.2.4.9–1	Estimated Average Annual Cumulative Radiological Doses and Resulting Health Effects to the Public and Workers From Normal Operation at Pantex Plant	4–940
Table 4.7.2.4.10–1	Waste Management Cumulative Impacts at Pantex Plant (2005)—Annual Volumes.....	4–941
Table 4.7.2.5.2–1	Site Infrastructure Cumulative Operation Impacts at Oak Ridge Reservation	4–943
Table 4.7.2.5.3–1	Estimated Cumulative Operational Concentrations of Pollutants at Oak Ridge Reservation and Comparison With Most Stringent Regulations or Guidelines—No Action and Storage Alternatives	4–945
Table 4.7.2.5.4–1	Cumulative Annual Water Usage at Oak Ridge Reservation	4–944
Table 4.7.2.5.4–2	Cumulative Annual Wastewater Discharge at Oak Ridge Reservation.....	4–947
Table 4.7.2.5.8–1	Socioeconomic Cumulative Impacts at Oak Ridge Reservation	4–948
Table 4.7.2.5.9–1	Estimated Average Annual Cumulative Radiological Doses and Resulting Health Effects to the Public and Workers From Normal Operation at Oak Ridge Reservation	4–949
Table 4.7.2.5.10–1	Waste Management Cumulative Impacts at Oak Ridge Reservation (2005)—Annual Volumes.....	4–950
Table 4.7.2.6.2–1	Site Infrastructure Cumulative Operation Impacts at Savannah River Site.....	4–952
Table 4.7.2.6.3–1	Estimated Cumulative Operational Concentrations of Pollutants at Savannah River Site and Comparison With Most Stringent Regulations or Guidelines—No Action and Storage Alternatives.....	4–953
Table 4.7.2.6.4–1	Cumulative Annual Water Usage at Savannah River Site.....	4–955
Table 4.7.2.6.4–2	Cumulative Annual Wastewater Discharge at Savannah River Site	4–956
Table 4.7.2.6.8–1	Socioeconomic Cumulative Impacts at Savannah River Site	4–957
Table 4.7.2.6.9–1	Estimated Average Annual Cumulative Radiological Doses and Resulting Health Effects to the Public and Workers From Normal Operation at Savannah River Site	4–958
Table 4.7.2.6.10–1	Waste Management Cumulative Impacts at Savannah River Site (2005)—Annual Volumes	4–959
Table 4.7.2.7.8–1	Socioeconomic Cumulative Impacts at Rocky Flats Environmental Technology Site	4–962
Table 4.7.3.1–1	Contribution to Land-Use Cumulative Impacts From the Disposition Scenario.....	4–965
Table 4.7.3.2–1	Contribution to Site Infrastructure Cumulative Impacts From the Disposition Scenario.....	4–966
Table 4.7.3.4–1	Contribution to Water Resource Cumulative Impacts From the Disposition Scenario.....	4–966
Table 4.7.3.8–1	Contribution to Socioeconomic Cumulative Impacts From the Disposition Scenario.....	4–967
Table 4.7.3.9–1	Contribution to Public and Occupational Health and Safety Cumulative Impacts From the Disposition Scenario.....	4–968

Table 4.7.3.10–1	Contribution to Waste Management Cumulative Impacts From the Disposition Scenario	4–969
Table 4.9.1–1	Comparison of Uranium Fuel and Mixed Oxide Fuel Cycles	4–974
Table 4.9.1.1–1	Comparison of Radionuclide Atmosphere Emissions	4–976
Table 4.9.1.1–2	Comparison of Potential Radiological Human Health Impacts to the General Public.....	4–977
Table 4.9.1.1–3	Comparison of Potential Radiological Human Health Impacts to Workers	4–978
Table 4.9.1.2–1	Comparison of Potential Emission Rates of Criteria Pollutants.	4–978
Table 4.9.2–1	Comparison of Potential Emission Rates of Criteria Pollutants Between the Mixed Oxide Fuel Cycle Using Partially Completed Light Water Reactors and Conventional Power Plants.	4–982
Table 4.9.2–2	Comparison of Potential Emission Rates of Criteria Pollutants Between the Mixed Oxide Fuel Cycle Using Evolutionary Light Water Reactors and Conventional Power Plants.	4–982
Table 10–1	Representatives From Affected Areas by State (Colorado, Georgia, Idaho, Nevada, New Mexico, South Carolina)	10–4
Table 10–2	Representatives From Affected Areas by State (Tennessee, Texas, Washington)	10–5
Table 10–3	Individuals Who Provided Comments on the Draft Programmatic Environmental Impact Statement or Have Requested Copies	10–7